

IN THE CLAIMS

- 1. (Currently amended) A method for transporting semiconductor wafers comprising:
 - providing a processing system including a transport module, a load lock, and process chamber;
 - extending a semiconductor wafer transport device, located within said transport module, from said transport module, allowing said wafer transport device to be exposed to the ambient environment outside of said processing system prior to entering into an adjacently positioned Front Opening Unified Pod (FOUP), said FOUP configured to remain a separate and uncoupled component from said processing system;
 - removing at least one semiconductor wafer from said FOUP using said wafer transport device; and
 - moving said wafer directly into said load lock or said process chamber.

- 2. (Original) The method of Claim 1, wherein said wafer transport device comprises a robot including an extendible robot arm and end-effector.

- 3. (Original) The method of Claim 1, wherein said wafer transport device is in a fixed position.

- 4. (Canceled)

- 5. (Canceled)

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6. (Original) The method of Claim 1, wherein said process chamber comprises a chamber taken from the group consisting a mini batch furnace, annealing chamber, a chemical vapor deposition (CVD) chamber, and chambers used for physical vapor deposition, etching, impurity doping and ashing.

7. (Original) The method of Claim 1, further comprising transporting said wafers between a cooling module and said process chamber.

8. (Original) The method of Claim 1, wherein said process chamber comprises a single wafer rapid thermal processor.

9. (Previously presented) The method of Claim 1, further comprising opening a gate valve to allow said wafer transport device to extend out from said transport module and into said FOUP.

10. (Canceled)

11. (Currently amended) A system for transporting semiconductor wafers comprising:

a processing system including a transport module, a load lock, and a process chamber, wherein the process chamber is located directly adjacent to the transport module;

a semiconductor wafer transport device disposed in said transport module; and

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a container configured to house a plurality of semiconductor wafers said container being a separate and uncoupled component from said processing system, said semiconductor wafer transport device configured to extend out from said transport module to become exposed to an ambient environment outside of said processing system and said container, before entering said container, said container configured to remain separate and uncoupled from said processing system and said semiconductor wafer transport device being configured to deliver said semiconductor wafer directly to said load lock or said process chamber.

12. (Original) The system of Claim 11, wherein said wafer transport device comprises a robot including an extendible robot arm and an end-effector.
13. (Original) The system of Claim 11, wherein said wafer transport device is in a fixed position within said transport module.
14. (Original) The system of Claim 11, wherein said container comprises a Front Opening Unified Pod (FOUP).
15. (Canceled)
16. (Original) The system of Claim 11, further comprising a cooling module disposed within said processing system, wherein said wafer transport device is configured to deliver said wafers into said cooling module.

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17. (Original) The system of Claim 11, wherein said process chamber comprises a single wafer rapid thermal processor.

18. (Original) The system of Claim 11, a gate valve assembly disposed on said transport module to isolate said wafer processing system.

19. (Original) The system of Claim 11, wherein said container comprises a wafer cassette.

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